

Amendments to the Claims:

The following lists all claims and their status:

1-4170. (cancelled)

4171. (currently amended): A mixture produced from a ~~portion of~~ a hydrocarbon containing formation, ~~the mixture comprising:~~

an olefin content of less than about 10% by weight; and

an average carbon number less than about 35.

4172. (currently amended): The mixture of claim 4171, wherein the mixture has further comprising an average carbon number less than about 30.

4173. (currently amended): The mixture of claim 4171, wherein the mixture has further comprising an average carbon number less than about 25.

4174. (currently amended): The mixture of claim 4171, further comprising:

a non-condensable hydrocarbons component comprising hydrocarbons having carbon numbers of less than 5; and

wherein a weight ratio of the hydrocarbons having carbon numbers from 2 through 4, ~~to methane, to methane in the mixture~~ is greater than approximately 1.

4175. (original): The mixture of claim 4171, further comprising condensable hydrocarbons, wherein less than about 1 % by weight, when calculated on an atomic basis, of the condensable hydrocarbons is nitrogen, wherein less than about 1 % by weight, when calculated on an atomic basis, of the condensable hydrocarbons is oxygen, and wherein less than about 1 % by weight, when calculated on an atomic basis, of the condensable hydrocarbons is sulfur.

4176. (currently amended): The mixture of claim 4171, further comprising ammonia, wherein greater than about 0.05 % by weight of the ~~produced~~ mixture is ammonia.

4177. (currently amended): The mixture of claim 4171, further comprising condensable hydrocarbons, wherein an olefin content of the condensable hydrocarbons is greater than about 0.1 % by weight of the condensable hydrocarbons, ~~and wherein the olefin content of the condensable hydrocarbons is less than about 15 % by weight of the condensable hydrocarbons.~~

4178. (original): The mixture of claim 4171, further comprising condensable hydrocarbons, wherein less than about 15 % by weight of the condensable hydrocarbons have a carbon number greater than about 25.

4179. (currently amended): The ~~condensable hydrocarbons~~ mixture of claim 4178, wherein less than about 1 % by weight, when calculated on an atomic basis, of the condensable hydrocarbons is nitrogen, wherein less than about 1 % by weight, when calculated on an atomic basis, of the condensable hydrocarbons is oxygen, and wherein less than about 1 % by weight, when calculated on an atomic basis, of the condensable hydrocarbons is sulfur.

4180. (previously presented): The mixture of claim 4171, further comprising condensable hydrocarbons, wherein greater than about 20 % by weight of the condensable hydrocarbons are aromatic compounds.

4181. (currently amended): The mixture of claim 4171, further comprising:

a non-condensable hydrocarbons component comprising hydrocarbons having carbon numbers of less than about 5, wherein a weight ratio of the hydrocarbons having carbon ~~number~~ numbers from 2 through 4, ~~to methane, to methane~~ in the ~~mixture~~ non-condensable component is greater than approximately 1;

~~wherein the non-condensable hydrocarbons further comprise H<sub>2</sub>, wherein greater than about 15 % by weight of the non-condensable~~ component ~~hydrocarbons~~ comprises H<sub>2</sub>; and  
condensable hydrocarbons, ~~comprising:~~

~~\_\_\_\_\_oxygenated hydrocarbons, wherein greater than about 1.5 % by weight of the condensable hydrocarbons comprises~~comprise oxygenated hydrocarbons; and

~~\_\_\_\_\_aromatic compounds, wherein greater than about 20 % by weight of the condensable hydrocarbons comprises~~comprise aromatic compounds.

4182. (currently amended): The mixture of claim 4171, further comprising:

condensable hydrocarbons, wherein less than about 5 % by weight of the condensable hydrocarbons comprises hydrocarbons having a carbon number greater than about 25;

~~\_\_\_\_\_wherein the condensable hydrocarbons further comprise:~~

~~\_\_\_\_\_oxygenated hydrocarbons, wherein greater than about 5 % by weight of the condensable hydrocarbons comprises~~ oxygenated hydrocarbons; and

~~\_\_\_\_\_aromatic compounds, wherein greater than about 30 % by weight of the condensable hydrocarbons comprises~~ aromatic compounds; and

a non-condensable component hydrocarbons comprising H<sub>2</sub>, wherein greater than about 15 % by weight of the non-condensable component hydrocarbons comprises H<sub>2</sub>.

4183. (currently amended): The mixture of claim 4171, ~~further comprising a condensable mixture, comprising:~~

~~\_\_\_\_\_olefins, wherein about 0.1 % by weight to about 15 % by weight of the condensable mixture comprises~~hydrocarbons comprise olefins; ~~and~~

~~\_\_\_\_\_asphaltenes, wherein less than about 0.1 % by weight of the condensable mixture comprises~~hydrocarbons comprise asphaltenes.

4184. (currently amended): The mixture of claim 4183, ~~further comprising oxygenated hydrocarbons, wherein less than about 15 % by weight of the mixture comprises~~condensable hydrocarbons comprise oxygenated ~~hydrocarbons;~~hydrocarbons.

4185. (currently amended): The mixture of claim 4171, ~~further comprising a condensable mixture, comprising:~~

~~olefins, wherein about 0.1 % by weight to about 2 % by weight of the condensable mixture comprises~~hydrocarbons comprise olefins; and, and

~~multi-ring aromatics, wherein less than about 2 % by weight of the condensable mixture comprises~~hydrocarbons comprise multi-ring aromatics with more than two rings.

4186. (currently amended): The mixture of claim ~~4184~~4185, ~~further comprising oxygenated hydrocarbons, wherein greater than about 25 % by weight of the mixture comprises~~condensable hydrocarbons comprise oxygenated hydrocarbons.

4187. (currently amended): The mixture of claim 4171, further comprising:

a non-condensable hydrocarbons component, wherein the non-condensable hydrocarbons comprise H<sub>2</sub>, wherein greater than about 10 % by weight of the non-condensable component hydrocarbons comprises H<sub>2</sub>, and; wherein a weight ratio of hydrocarbons having greater than about 2 carbon atoms and less than 5 carbon atoms to methane is greater than about 0.4; and

ammonia, wherein greater than about 0.5 % by weight of the mixture comprises ammonia; and

~~hydrocarbons, wherein a weight ratio of hydrocarbons having greater than about 2 carbon atoms, to methane, is greater than about 0.4.~~

4188-4284 (cancelled)

4285. (currently amended): A mixture produced from ~~a portion of~~ a hydrocarbon containing formation, comprising:

condensable hydrocarbons, wherein less than about 15 weight % of the condensable hydrocarbons have a carbon number greater than 25; and

wherein the condensable hydrocarbons comprise oxygenated hydrocarbons, and wherein greater than about 5 % by weight of the condensable hydrocarbons comprises oxygenated hydrocarbons.

4286. (currently amended): The mixture of claim 4285, further comprising non-condensable hydrocarbons, wherein the non-condensable hydrocarbons comprise hydrocarbons having carbon numbers of less than 5, and wherein a weight ratio of hydrocarbons having carbon numbers from 2 through 4, ~~to methane~~, to methane is greater than approximately 1.

4287. (original): The mixture of claim 4285, wherein the condensable hydrocarbons further comprise olefins, and wherein about 0.1 % by weight to about 15 % by weight of the condensable hydrocarbons are olefins.

4288. (original): The mixture of claim 4285, further comprising non-condensable hydrocarbons, wherein a molar ratio of ethene to ethane in the non-condensable hydrocarbons ranges from about 0.001 to about 0.15.

4289. (previously presented): The mixture of claim 4285, wherein the condensable hydrocarbons further comprise nitrogen containing compounds, and wherein less than about 1 % by weight, when calculated on an atomic basis, of the condensable hydrocarbons is nitrogen.

4290. (previously presented): The mixture of claim 4285, wherein the condensable hydrocarbons further comprise oxygen containing compounds, and wherein less than about 1 % by weight, when calculated on an atomic basis, of the condensable hydrocarbons is oxygen.

4291. (previously presented): The mixture of claim 4285, wherein the condensable hydrocarbons further comprise sulfur containing compounds, and wherein less than about 1 % by weight, when calculated on an atomic basis, of the condensable hydrocarbons is sulfur.

4292. (original): The mixture of claim 4285, wherein the condensable hydrocarbons further comprise oxygen containing compounds, wherein about 5 % by weight to about 30 % by weight of the condensable hydrocarbons comprise oxygen containing compounds, and wherein the oxygen containing compounds comprise phenols.

4293. (original): The mixture of claim 4285, wherein the condensable hydrocarbons further comprise aromatic compounds, and wherein greater than about 20 % by weight of the condensable hydrocarbons are aromatic compounds.

4294. (original): The mixture of claim 4285, wherein the condensable hydrocarbons further comprise multi-ring aromatics, and wherein less than about 5 % by weight of the condensable hydrocarbons comprises multi-ring aromatics with more than two rings.

4295. (original): The mixture of claim 4285, wherein the condensable hydrocarbons further comprise asphaltenes, and wherein less than about 0.3 % by weight of the condensable hydrocarbons are asphaltenes.

4296. (original): The mixture of claim 4285, wherein the condensable hydrocarbons further comprise cycloalkanes, and wherein about 5 % by weight to about 30 % by weight of the condensable hydrocarbons are cycloalkanes.

4297. (currently amended): The mixture of claim 4285, further comprising a non-condensable hydrocarbons component, wherein the non-condensable ~~hydrocarbons comprise~~component comprises hydrogen, and wherein the hydrogen is greater than about 10 % by volume of the non-condensable ~~hydrocarbons component~~ at 25 °C and one atmosphere absolute pressure, and wherein the hydrogen is less than about 80 % by volume of the non-condensable ~~hydrocarbons component~~ at 25 °C and one atmosphere absolute pressure.

4298. (currently amended): The mixture of claim 4285, further comprising ammonia, and wherein greater than about 0.05 % by weight of the ~~produced~~ mixture is ammonia.

4299. (original): The mixture of claim 4285, further comprising ammonia, and wherein the ammonia is used to produce fertilizer.

4300. (currently amended): The mixture of claim 4285, wherein the condensable hydrocarbons ~~further comprises~~comprise olefins, and wherein less than about 10 % by weight of the condensable hydrocarbons comprises olefins.

4301. (currently amended): The mixture of claim 4285, wherein the condensable hydrocarbons ~~further comprises~~comprise olefins, and wherein about 0.1 % to about 5 % by weight of the condensable hydrocarbons comprises olefins.

4302. (currently amended): The mixture of claim 4285, wherein the condensable hydrocarbons ~~further comprises~~comprise olefins, and wherein about 0.1 % to about 2 % by weight of the condensable hydrocarbons comprises olefins.

4303. (currently amended): The mixture of claim 4285, wherein the condensable hydrocarbons ~~further comprises~~comprise oxygenated hydrocarbons, and wherein greater than about 5 % by weight of the condensable hydrocarbons comprises the oxygenated ~~hydrocarbon~~hydrocarbons.

4304. (currently amended): The mixture of claim 4285, further comprising a non-condensable component~~hydrocarbons~~, and wherein the non-condensable hydrocarbons comprise H<sub>2</sub>, wherein greater than about 5 % by weight of the non-condensable ~~component~~hydrocarbons comprises H<sub>2</sub>.

4305. (currently amended): The mixture of claim 4285, further comprising a non-condensable component~~hydrocarbons~~, wherein the non-condensable hydrocarbons comprise H<sub>2</sub>, and wherein greater than about 15 % by weight of the non-condensable ~~component~~hydrocarbons comprises H<sub>2</sub>.

4306. (currently amended): The mixture of claim 4285, wherein a weight ratio of hydrocarbons having greater than about 2 carbon atoms, ~~to methane~~, to methane is greater than about 0.3.

4307. (currently amended): A mixture produced from ~~a portion of~~ a hydrocarbon containing formation, comprising:

condensable hydrocarbons, wherein less than about 15 % by weight of the condensable hydrocarbons have a carbon number greater than about 25;

wherein less than about 1 % by weight of the condensable hydrocarbons, when calculated on an atomic basis, is nitrogen;

wherein less than about 1 % by weight of the condensable hydrocarbons, when calculated on an atomic basis, is oxygen; and

wherein less than about 1 % by weight of the condensable hydrocarbons, when calculated on an atomic basis, is sulfur.

4308. (currently amended): The mixture of claim 4307, further comprising non-condensable hydrocarbons, wherein the non-condensable ~~component hydrocarbons comprises~~ hydrocarbons comprise hydrocarbons having carbon numbers of less than 5, and wherein a weight ratio of hydrocarbons having carbon numbers from 2 through 4, ~~to methane,~~ to methane is greater than approximately 1.

4309. (original): The mixture of claim 4307, wherein the condensable hydrocarbons further comprise olefins, and wherein about 0.1 % by weight to about 15 % by weight of the condensable hydrocarbons are olefins.

4310. (original): The mixture of claim 4307, further comprising non-condensable hydrocarbons, and wherein a molar ratio of ethene to ethane in the non-condensable hydrocarbons ranges from about 0.001 to about 0.15.

4311. (currently amended): The mixture of claim 4307, wherein the condensable hydrocarbons further comprise oxygen containing compounds, ~~wherein about 5 % by weight to about 30 % by weight of the condensable hydrocarbons comprise oxygen containing compounds,~~ and wherein the oxygen containing compounds comprise phenols.



4312. (original): The mixture of claim 4307, wherein the condensable hydrocarbons further comprise aromatic compounds, and wherein greater than about 20 % by weight of the condensable hydrocarbons are aromatic compounds.

4313. (original): The mixture of claim 4307, wherein the condensable hydrocarbons further comprise multi-ring aromatics, and wherein less than about 5 % by weight of the condensable hydrocarbons comprises multi-ring aromatics with more than two rings.

4314. (original): The mixture of claim 4307, wherein the condensable hydrocarbons further comprise asphaltenes, and wherein less than about 0.3 % by weight of the condensable hydrocarbons are asphaltenes.

4315. (original): The mixture of claim 4307, wherein the condensable hydrocarbons further comprise cycloalkanes, and wherein about 5 % by weight to about 30 % by weight of the condensable hydrocarbons are cycloalkanes.

4316. (currently amended): The mixture of claim 4307, further comprising a non-condensable component~~hydrocarbons~~, and wherein the non-condensable ~~hydrocarbons~~ component comprises ~~comprise~~ hydrogen, and wherein greater than about 10 % by volume at 25 °C and one atmosphere absolute pressure and less than about 80 % by volume at 25 °C and one atmosphere absolute pressure of the non-condensable component comprises hydrogen.

4317. (currently amended): The mixture of claim 4307, further comprising ammonia, and wherein greater than about 0.05 % by weight of the ~~produced~~ mixture is ammonia.

4318. (original): The mixture of claim 4307, further comprising ammonia, and wherein the ammonia is used to produce fertilizer.

4319. (currently amended): The mixture of claim 4307, wherein the condensable ~~component~~ hydrocarbons further ~~comprises~~ comprise olefins, and wherein about 0.1 % to about 5 % by weight of the condensable ~~component~~ hydrocarbons comprises olefins.

4320. (currently amended): The mixture of claim 4307, wherein the condensable ~~component~~ hydrocarbons further ~~comprises~~ comprise olefins, and wherein about 0.1 % to about 2.5 % by weight of the condensable ~~component~~ hydrocarbons comprises olefins.

4321. (original): The mixture of claim 4307, wherein the condensable hydrocarbons further comprise oxygenated hydrocarbons, and wherein greater than about 5 % by weight of the condensable hydrocarbons comprises oxygenated hydrocarbons.

4322. (currently amended): The mixture of claim 4307, ~~further comprising a non-condensable component~~ hydrocarbons, ~~wherein the non-condensable hydrocarbons comprise H<sub>2</sub>~~, and wherein greater than about 5 % by weight of the non-condensable ~~component~~ hydrocarbons comprises H<sub>2</sub>.

4323. (currently amended): The mixture of claim 4307, ~~further comprising a non-condensable component~~ hydrocarbons, ~~wherein the non-condensable hydrocarbons comprise H<sub>2</sub>~~, and wherein greater than about 15 % by weight of the non-condensable ~~component~~ hydrocarbons comprises H<sub>2</sub>.

4324. (currently amended): The mixture of claim 4307, ~~further comprising non-condensable hydrocarbons~~, wherein a weight ratio of ~~compounds within the non-condensable hydrocarbons~~ having greater than about 2 carbon atoms to methane, ~~to methane~~, is greater than about 0.3.

4325. (currently amended): A mixture produced from ~~a portion of~~ a hydrocarbon containing formation, comprising:

condensable hydrocarbons, wherein less than about 15 % by weight of the condensable hydrocarbons have a carbon number greater than 20; and

wherein the condensable hydrocarbons comprise olefins, wherein an olefin content of the condensable ~~component~~hydrocarbons is less than about 10 % by weight of the condensable ~~component~~hydrocarbons.

4326. (currently amended): The mixture of claim 4325, ~~further~~ comprising non-condensable hydrocarbons, wherein the non-condensable hydrocarbons comprise hydrocarbons having carbon numbers of less than 5, and wherein a weight ratio of hydrocarbons having carbon numbers from 2 through 4, ~~to methane~~, to methane is greater than approximately 1.

4327. (original): The mixture of claim 4325, wherein the condensable hydrocarbons further comprise olefins, and wherein about 0.1 % by weight to about 15 % by weight of the condensable hydrocarbons are olefins.

4328. (currently amended): The mixture of claim 4325, ~~further~~ comprising non-condensable hydrocarbons, and wherein a molar ratio of ethene to ethane in the non-condensable hydrocarbons ranges from about 0.001 to about 0.15.

4329. (previously presented): The mixture of claim 4325, wherein the condensable hydrocarbons further comprise nitrogen containing compounds, and wherein less than about 1 % by weight, when calculated on an atomic basis, of the condensable hydrocarbons is nitrogen.

4330. (previously presented): The mixture of claim 4325, wherein the condensable hydrocarbons further comprise oxygen containing compounds, and wherein less than about 1 % by weight, when calculated on an atomic basis, of the condensable hydrocarbons is oxygen.

4331. (previously presented): The mixture of claim 4325, wherein the condensable hydrocarbons further comprise sulfur containing compounds, and wherein less than about 1 % by weight, when calculated on an atomic basis, of the condensable hydrocarbons is sulfur.

4332. (currently amended): The mixture of claim 4325, ~~wherein the condensable hydrocarbons,~~ wherein about 5 % by weight to about 30 % by weight of the condensable hydrocarbons comprise oxygen containing compounds, and wherein the oxygen containing compounds comprise phenols.

4333. (original): The mixture of claim 4325, wherein the condensable hydrocarbons further comprise aromatic compounds, and wherein greater than about 20 % by weight of the condensable hydrocarbons are aromatic compounds.

4334. (original): The mixture of claim 4325, wherein the condensable hydrocarbons further comprise multi-ring aromatics, and wherein less than about 5 % by weight of the condensable hydrocarbons comprises multi-ring aromatics with more than two rings.

4335. (original): The mixture of claim 4325, wherein the condensable hydrocarbons further comprise asphaltenes, and wherein less than about 0.3 % by weight of the condensable hydrocarbons are asphaltenes.

4336. (original): The mixture of claim 4325, wherein the condensable hydrocarbons further comprise cycloalkanes, and wherein about 5 % by weight to about 30 % by weight of the condensable hydrocarbons are cycloalkanes.

4337. (currently amended): The mixture of claim 4325, ~~further comprising a non-condensable component hydrocarbons,~~ wherein the non-condensable ~~hydrocarbons component~~ comprises hydrogen, and wherein the hydrogen is about 10 % by volume at 25 °C and one atmosphere absolute pressure to about 80 % by volume at 25 °C and one atmosphere absolute pressure of the non-condensable ~~component hydrocarbons~~.

4338. (currently amended): The mixture of claim 4325, further comprising ammonia, wherein greater than about 0.05 % by weight of the ~~produced~~ mixture is ammonia.

4339. (original): The mixture of claim 4325, further comprising ammonia, and wherein the ammonia is used to produce fertilizer.

4340. (currently amended): The mixture of claim 4325, wherein about 0.1 % to about 5 % by weight of the condensable ~~component comprises~~ hydrocarbons comprise olefins.

4341. (currently amended): The mixture of claim 4325, wherein about 0.1 % to about 2 % by weight of the condensable ~~component comprises~~ hydrocarbons comprise olefins.

4342. (currently amended): The mixture of claim 4325, wherein the condensable ~~component further comprises~~ hydrocarbons comprise oxygenated hydrocarbons, and wherein greater than about 1.5 % by weight of the condensable ~~component comprises~~ hydrocarbons comprise oxygenated hydrocarbons.

4343. (currently amended): The mixture of claim 4325, wherein the condensable ~~component further comprises~~ hydrocarbons comprise oxygenated hydrocarbons, and wherein greater than about 25 % by weight of the condensable ~~component comprises~~ hydrocarbons comprise oxygenated hydrocarbons.

4344. (currently amended): The mixture of claim 4325, further comprising a non-condensable hydrocarbons component, ~~wherein the non-condensable hydrocarbons comprise H<sub>2</sub>~~, and wherein greater than about 5 % by weight of the non-condensable hydrocarbons component comprises H<sub>2</sub>.

4345. (currently amended): The mixture of claim 4325, further comprising a non-condensable hydrocarbons component, ~~wherein the non-condensable hydrocarbons comprise H<sub>2</sub>~~, and wherein greater than about 15 % by weight of the non-condensable hydrocarbons component comprises H<sub>2</sub>.

4346. (currently amended): The mixture of claim 4325, further comprising non-condensable hydrocarbons, wherein the non-condensable hydrocarbons comprise hydrocarbons having carbon

numbers of less than 5, and wherein a weight ratio of hydrocarbons having carbon numbers from 2 through 4, ~~to methane,~~ to methane is greater than approximately 0.3.

4347. (currently amended): A mixture produced from ~~a portion of~~ a hydrocarbon containing formation, comprising:

condensable hydrocarbons, wherein less than about 5 % by weight of the condensable hydrocarbons comprises hydrocarbons having a carbon number greater than about 25; and

wherein the condensable hydrocarbons further comprise aromatic compounds, wherein more than about 20 % by weight of the condensable hydrocarbons comprises aromatic compounds.

4348. (currently amended): The mixture of claim 4347, ~~further comprising~~ non-condensable hydrocarbons, wherein the non-condensable hydrocarbons comprise hydrocarbons having carbon numbers of less than 5, and wherein a weight ratio of hydrocarbons having carbon numbers from 2 through 4, ~~to methane,~~ to methane is greater than approximately 1.

4349. (original): The mixture of claim 4347, wherein the condensable hydrocarbons further comprise olefins, and wherein about 0.1 % by weight to about 15 % by weight of the condensable hydrocarbons are olefins.

4350. (original): The mixture of claim 4347, further comprising non-condensable hydrocarbons, wherein a molar ratio of ethene to ethane in the non-condensable hydrocarbons ranges from about 0.001 to about 0.15.

4351. (previously presented): The mixture of claim 4347, wherein the condensable hydrocarbons further comprise nitrogen containing compounds, and wherein less than about 1 % by weight, when calculated on an atomic basis, of the condensable hydrocarbons is nitrogen.

4352. (previously presented): The mixture of claim 4347, wherein the condensable hydrocarbons further comprise oxygen containing compounds, and wherein less than about 1 % by weight, when calculated on an atomic basis, of the condensable hydrocarbons is oxygen.

4353. (previously presented): The mixture of claim 4347, wherein the condensable hydrocarbons further comprise sulfur containing compounds, and wherein less than about 1 % by weight, when calculated on an atomic basis, of the condensable hydrocarbons is sulfur.

4354. (original): The mixture of claim 4347, wherein the condensable hydrocarbons further comprise oxygen containing compounds, wherein about 5 % by weight to about 30 % by weight of the condensable hydrocarbons comprise oxygen containing compounds, and wherein the oxygen containing compounds comprise phenols.

4355. (original): The mixture of claim 4347, wherein the condensable hydrocarbons further comprise multi-ring aromatics, and wherein less than about 5 % by weight of the condensable hydrocarbons comprises multi-ring aromatics with more than two rings.

4356. (original): The mixture of claim 4347, wherein the condensable hydrocarbons further comprise asphaltenes, and wherein less than about 0.3 % by weight of the condensable hydrocarbons are asphaltenes.

4357. (original): The mixture of claim 4347, wherein the condensable hydrocarbons comprise cycloalkanes, and wherein about 5 % by weight to about 30 % by weight of the condensable hydrocarbons are cycloalkanes.

4358. (currently amended): The mixture of claim 4347, further comprising a non-condensable component hydrocarbons, ~~wherein the non-condensable hydrocarbons comprise hydrogen, and~~ wherein the hydrogen ( $H_2$ ) is greater than about 10 % by volume at 25 °C and one atmosphere absolute pressure and less than about 80 % by volume at 25 °C and one atmosphere absolute pressure of the non-condensable component hydrocarbons.

4359. (currently amended): The mixture of claim 4347, further comprising ammonia, and wherein greater than about 0.05 % by weight of the ~~produced~~ mixture is ammonia.

4360. (original): The mixture of claim 4347, further comprising ammonia, and wherein the ammonia is used to produce fertilizer.

4361. (currently amended): The mixture of claim 4347, wherein the condensable hydrocarbons ~~further~~ comprise olefins, and wherein about 0.1 % to about 5 % by weight of the condensable hydrocarbons comprises olefins.

4362. (currently amended): The mixture of claim 4347, wherein the condensable hydrocarbons ~~further comprises~~ comprise olefins, and wherein about 0.1 % to about 2 % by weight of the condensable hydrocarbons comprises olefins.

4363. (currently amended): The mixture of claim 4347, wherein the condensable hydrocarbons ~~further comprises~~ comprise multi-ring aromatic compounds, and wherein less than about 2 % by weight of the condensable hydrocarbons comprises multi-ring aromatic compounds.

4364. (currently amended): The mixture of claim 4347, wherein the condensable hydrocarbons ~~comprises~~ comprise oxygenated hydrocarbons, and wherein greater than about 1.5 % by weight of the condensable hydrocarbons comprises oxygenated hydrocarbons.

4365. (currently amended): The mixture of claim 4347, wherein the condensable hydrocarbons ~~comprises~~ comprise oxygenated hydrocarbons, and wherein greater than about 25 % by weight of the condensable ~~component~~ hydrocarbons comprises oxygenated hydrocarbons.

4366. (currently amended): The mixture of claim 4347, ~~further comprising a non-condensable component~~ hydrocarbons, ~~wherein the non-condensable hydrocarbons comprise H<sub>2</sub>~~, and wherein greater than about 5 % by weight of the non-condensable component ~~hydrocarbons~~ comprises H<sub>2</sub>.



4367. (currently amended): The mixture of claim 4347, ~~further comprising a non-condensable hydrocarbons~~component, wherein the non-condensable hydrocarbons ~~comprise H<sub>2</sub>~~, and wherein greater than about 15 % by weight of the non-condensable ~~hydrocarbons~~component comprises H<sub>2</sub>.

4368. (currently amended): The mixture of claim 4347, ~~further comprising non-condensable hydrocarbons~~, wherein the non-condensable hydrocarbons ~~comprises~~comprise hydrocarbons having carbon numbers of less than 5, and wherein a weight ratio of hydrocarbons having carbon numbers from 2 through 4, ~~to methane~~, to methane is greater than approximately 0.3.

4369-5395. (cancelled)